

IN THE CLAIMS

I. *Substitution of Claims*

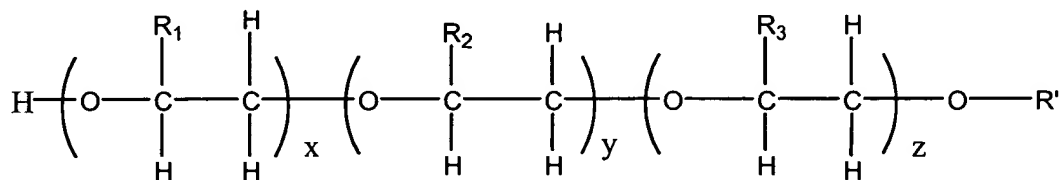
Please substitute the below pending claims with the corresponding amended claims, as shown below:

1. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

C2 removing the organic solvent from the substrates using at least one pressurized fluid solvent;

wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R' is C_jH_{2j+1} wherein j is an integer between one and (13-3(x+y+z)), inclusive; and

R₁₋₃ are independently H or CH₃;

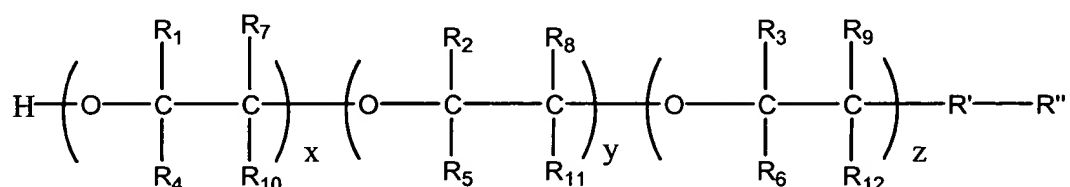
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

2. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

removing the organic solvent from the substrates using at least one pressurized fluid solvent;

wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R'' is benzyl, phenyl, partially or fully fluorinated benzyl or phenyl, C_jH_{2j+1}, or C_jH_aF_b

wherein j is an integer between one and (13-3(x+y+z)), inclusive, a and b each is independently an integer between zero and 2j+1, inclusive, and a+b=2j+1;

R₁₋₁₂ are independently C_mH_nF_p or C_dH_eF_g where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and n+p=2m+1, d is an integer between zero and two, inclusive, e and g are integers between zero and five, inclusive, and e+g=2d+1; and

R' is O, S, carbonyl or ester;

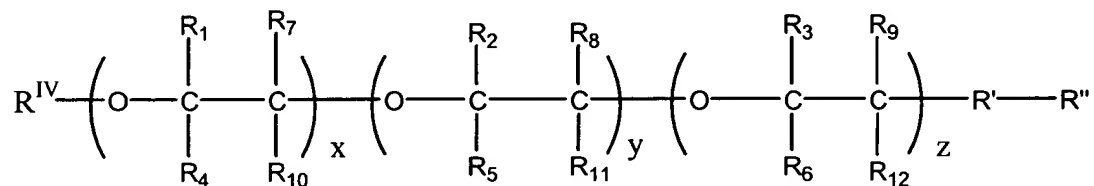
C2 wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

33. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

removing the organic solvent from the substrates using at least one pressurized fluid solvent;

C3 wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R'' is C_jH_{2j+1} or $C_jH_uF_v$ and R^{IV} is C_kH_{2k+1} or $C_kH_rF_s$ wherein j and k are each an integer between one and $(13-3(x+y+z))$, inclusive, and $j+k$ is an integer between two and $(13-3(x+y+z))$, inclusive, u and v are each an integer between zero and $2j+1$, inclusive, and $u+v=2j+1$, and r and s are each an integer between zero and $2k+1$, inclusive, and $r+s=2k+1$, and if k equals zero, then s equals zero;

R_{1-3} and R_{10-12} are independently $C_mH_nF_p$, where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and $n+p=2m+1$;

R_{4-9} are independently H, F, CH_3 , CH_2F , CHF_2 , or CF_3 ; and

R' is O, S, carbonyl or ester, and if R' is O or S and j equals zero then v equals zero;

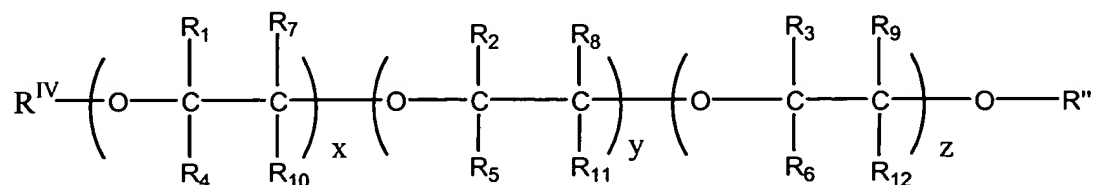
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

50. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

removing the organic solvent from the substrates using at least one pressurized fluid solvent;

wherein the organic solvent is of the structural formula:

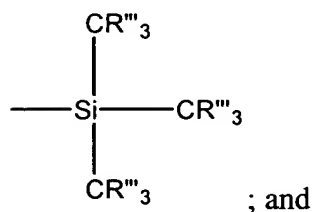
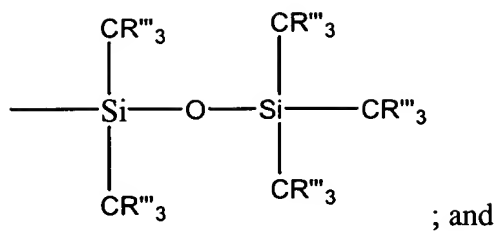


wherein x , y , and z are each zero or one;

at least one of x , y , and z is one;

R'' is selected from the group consisting of:

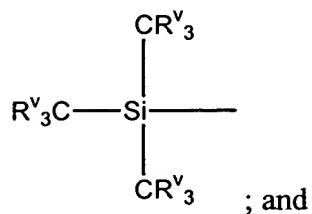
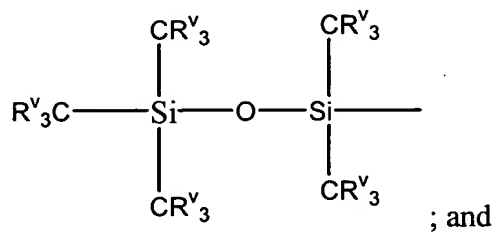
H;



wherein R^{III} is H, F or combinations of H and F;

R^{IV} is selected from the group consisting of:

H;



wherein R^V is H, F or combinations of H and F; and

when R^{II} is H or F, R^{IV} is not H or F;

R₁₋₃ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃; and

R₄₋₁₂ are independently H or F;

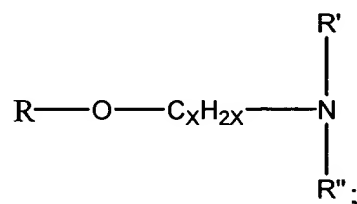
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

57. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

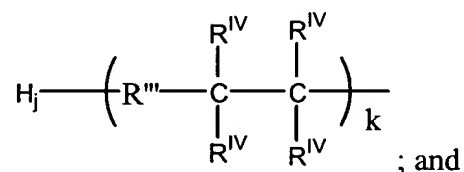
cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

removing the organic solvent from the substrates using at least one pressurized fluid solvent;

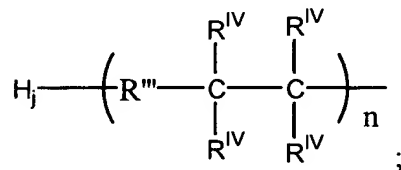
wherein the organic solvent is of the structural formula:



wherein R' is



R'' is independently



wherein R''' is O and j is 1 or R''' is N and j is 2;

n is an integer between zero and two;

R^{IV} are each independently H, CH₃ or CH₂CH₃ and k is an integer between zero and two inclusive; and

wherein R is C_yH_{2y+1} and y is an integer between one and $(12 - (3k + 3n + x))$ inclusive,
and x is an integer between one and $(12 - (3k + y))$, inclusive;

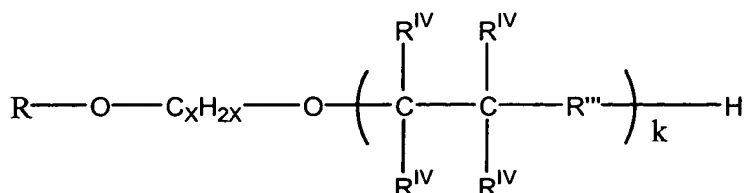
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

CS 58. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate by removing substantially all of a contaminant with at least one organic solvent in absence of liquid carbon dioxide, the organic solvent comprising less than 50% by weight water; and

removing the organic solvent from the substrates using at least one pressurized fluid solvent;

wherein the organic solvent is of the structural formula:



wherein R''' is O or NH;

R^{IV} are each independently H, CH_3 or CH_2CH_3 and k is an integer between zero and two inclusive; and

wherein R is C_yH_{2y+1} and y is an integer between one and $(12 - (3k + x))$ inclusive, and x is an integer between one and $(12 - (3k + y))$, inclusive;

CS

wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

II. *Addition of Claims*

Please add the following claims:

59. (New) The process of any of claims 1, 2, 33, 50, 57, or 58; wherein the organic solvent contains 5 or more carbon atoms. 4
60. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the organic solvent has a flash point of greater than 200° F. 6
61. (New) The process of claim 1, wherein the organic solvent is selected from the group consisting of propylene glycol t-butyl ether, dipropylene glycol methyl ether, tripropylene glycol methyl ether, dipropylene glycol n-butyl ether, dipropylene glycol n-propyl ether, and tripropylene glycol n-butyl ether. 1
62. (New) The process of any of claim 1, 2, 33, 50, 57, or 58, wherein the organic solvent further comprises one or more co-solvents, detergents, or additives to enhance cleaning capability. 6
63. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is between approximately 5° C to approximately 30° C. 6
64. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent comprises liquid carbon dioxide. 6
65. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is at a pressure of between approximately 600 pounds per square inch to approximately 1050 pounds per square inch. 6
66. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is at a pressure of between approximately 570 pounds per square inch to approximately 830 pounds per square inch. 6

67. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent comprises xenon, nitrous oxide, or sulfur hexafluoride.

68. (New) The process of claim 67, wherein the pressurized fluid solvent is compressed to a subcritical condition.

69. (New) The process of claim 68, wherein the pressurized fluid solvent is a liquid.

70. (New) The process of claim 67, wherein the pressurized fluid solvent is compressed to a supercritical condition.

71. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the textile comprises a fabric, an article of clothing, a protective cover, a carpet, upholstery, furniture, or a window treatment.

72. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the contaminant comprises an insoluble particulate.

73. (New) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the contaminant comprises an organic solvent soluble oil, or an organic solvent soluble grease.

74. (New) The process of claim 2, wherein:

R_{1-3} are independently selected from the group consisting of H, F, CH₃, CH₂CH₃, CH₂F, CHF₂, CF₃, and C_mH_nF_p;

R_{4-9} are independently selected from the group consisting of H and F; and

R_{10-12} are independently selected from the group consisting of H, F, CH₃, CH₂CH₃, CH₂F, CHF₂, CF₃, C_dH_eF_g, and C_mH_nF_p.

75. (New) The process of claim 74, wherein R_{1-3} are independently selected from the group consisting of H and CH₃.

76. (New) The process of claim 74, wherein R_{1-3} are independently selected from the group consisting of H, CH_3 , and CH_2CH_3 .

77. (New) The process of claim 74, wherein R_{1-3} are independently selected from the group consisting of H, F, CH_3 , CH_2F , CHF_2 , and CF_3 .

78. (New) The process of claim 74, wherein R_{1-3} are $C_mH_nF_p$.

79. (New) The process of claim 74, wherein R_{4-9} are H.

80. (New) The process of claim 74, wherein R_{4-9} are F.

81. (New) The process of claim 74, wherein R_{10-12} are H.

82. (New) The process of claim 74, wherein R_{10-12} are independently selected from the group consisting of H or F.

83. (New) The process of claim 74, wherein R_{10-12} are independently selected from the group consisting of H and CH_3 .

84. (New) The process of claim 74, wherein R_{10-12} are independently selected from the group consisting of H, CH_3 , and CH_2CH_3 .

85. (New) The process of claim 74, wherein R_{10-12} are independently selected from the group consisting of H, F, CH_3 , CH_2F , CHF_2 , and CF_3 .

86. (New) The process of claim 74, wherein R_{10-12} are $C_dH_eF_g$.

87. (New) The process of claim 74, wherein R_{10-12} are $C_mH_nF_p$.

88. (New) The process of claim 2, wherein R' is O.

89. (New) The process of claim 2, wherein R' is selected from the group consisting of S, carbonyl, and ester.

90. (New) The process of claim 33, wherein:

R_{1-3} and R_{10-12} are independently selected from the group consisting of H, F, CH_3 , CH_2CH_3 , CH_2F , CHF_2 , CF_3 , and $C_mH_nF_p$; and

R_{4-9} are independently selected from the group consisting of H, F, and CH_3 .

91. (New) The process of claim 90, wherein R_{1-3} and R_{10-12} are H.

92. (New) The process of claim 90, wherein R_{1-3} and R_{10-12} are independently selected from the group consisting of H and CH_3 .

93. (New) The process of claim 90, wherein R_{1-3} and R_{10-12} are independently selected from the group consisting of H, CH_3 , and CH_2CH_3 .

94. (New) The process of claim 90, wherein R_{1-3} and R_{10-12} are independently selected from the group consisting of H, F, CH_3 , CH_2F , CHF_2 , and CF_3 .

95. (New) The process of claim 90, wherein R_{1-3} and R_{10-12} are $C_mH_nF_p$.

96. (New) The process of claim 90, wherein R_{4-9} are H.

97. (New) The process of claim 90, wherein R_{4-9} are independently selected from the group consisting of H and F.

98. (New) The process of claim 33, wherein R' is O.

99. (New) The process of claim 33, wherein R'' is C_jH_{2j+1} .

100. (New) The process of claim 33, wherein R'' is $C_jH_uF_v$.

101. (New) The process of claim 33, wherein R^{IV} is C_kH_{2k+1} .

102. (New) The process of claim 33, wherein R^{IV} is $C_kH_rF_s$.